

ETL 1110-3-394
27 Sep 91

Aircraft Manufacturer Sikorsky Aircraft

Aircraft Engine Manufacturer Pratt and Whitney (T73-P-1)

No. of Engines 2 Engine Rating 4500 SHP

Minimum Take-Off Weight 22.0 k-lb

Maximum Take-Off Weight Peace-Time 42.0 k-lb

Maximum Take-Off Weight War-Time 42.0 k-lb

Maximum Landing Weight 42.0 k-lb

Hover Ceiling (In Ground Effect) 10,600 ft

Hover Ceiling (Out of Ground Effect) 6,900 ft

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
22	6	6	6	7	4	5	6	7
42	12	12	12	12	11	12	13	14

Figure A-557. Sikorsky S-64 (CH-54A), Tarhe

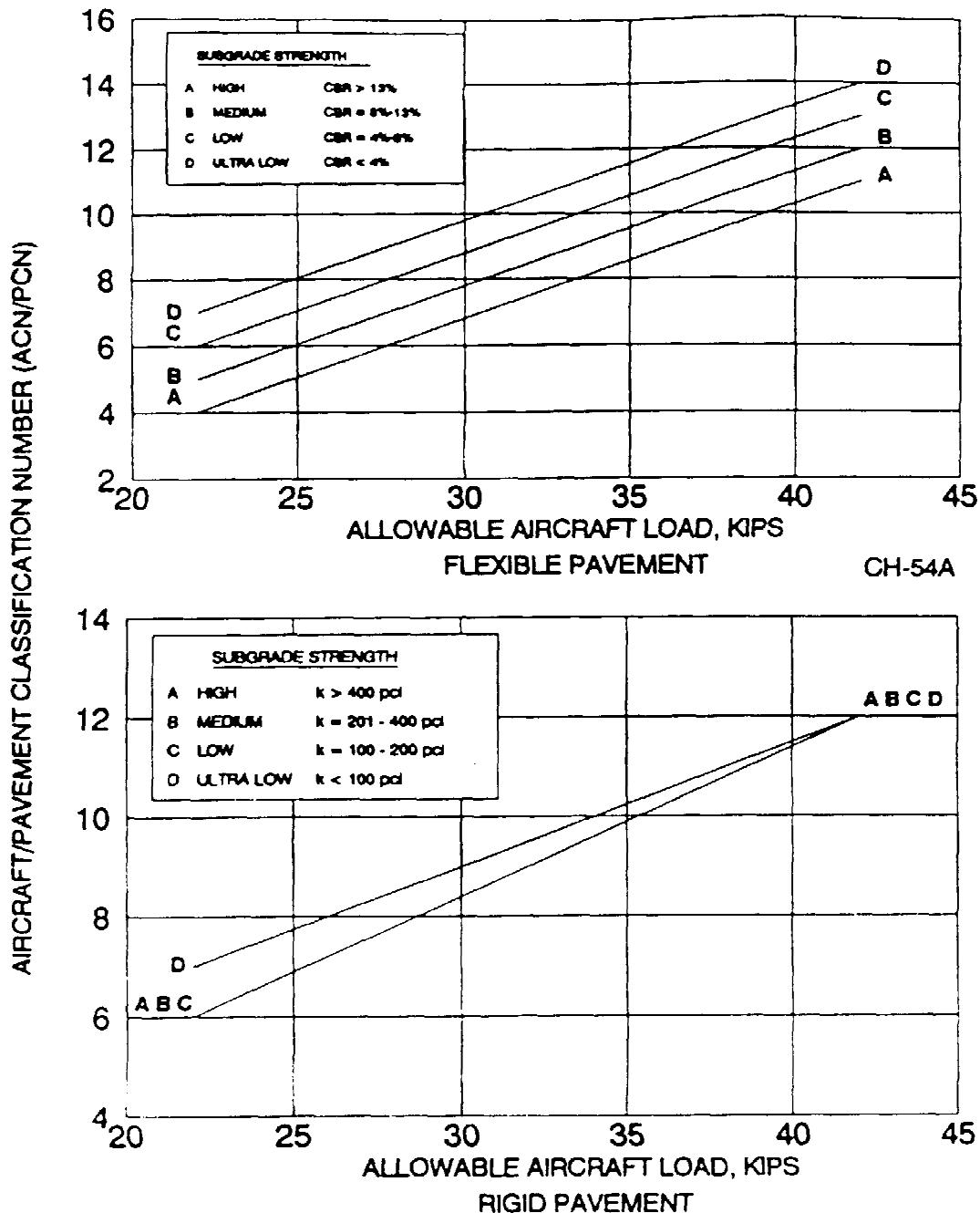


Figure A-558. Sikorsky S-64 (CH-54A), ACN/PCN Curves

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Aircraft Manufacturer Sikorsky Aircraft

Aircraft Engine Manufacturer General Electric (T64-GE-7)

No. of Engines 2 Engine Rating 3925 SHP

Minimum Take-Off Weight 26.7 k-lb

Maximum Take-Off Weight Peace-Time 38.4 k-lb

Maximum Take-Off Weight War-Time 42.0 k-lb

Maximum Landing Weight 42.0 k-lb

Hover Ceiling (In Ground Effect) 11,700 ft
(At 38.4 k-lb)

Hover Ceiling (Out of Ground Effect) 4,300 ft
(At 38.4 k-lb)

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
27	5	5	5	6	3	4	5	6
38	7	7	8	8	5	6	7	9
42	8	8	9	9	6	7	8	10

Figure A-559. Sikorsky S-65A (CH-53C and HH-53C), Super Jolly

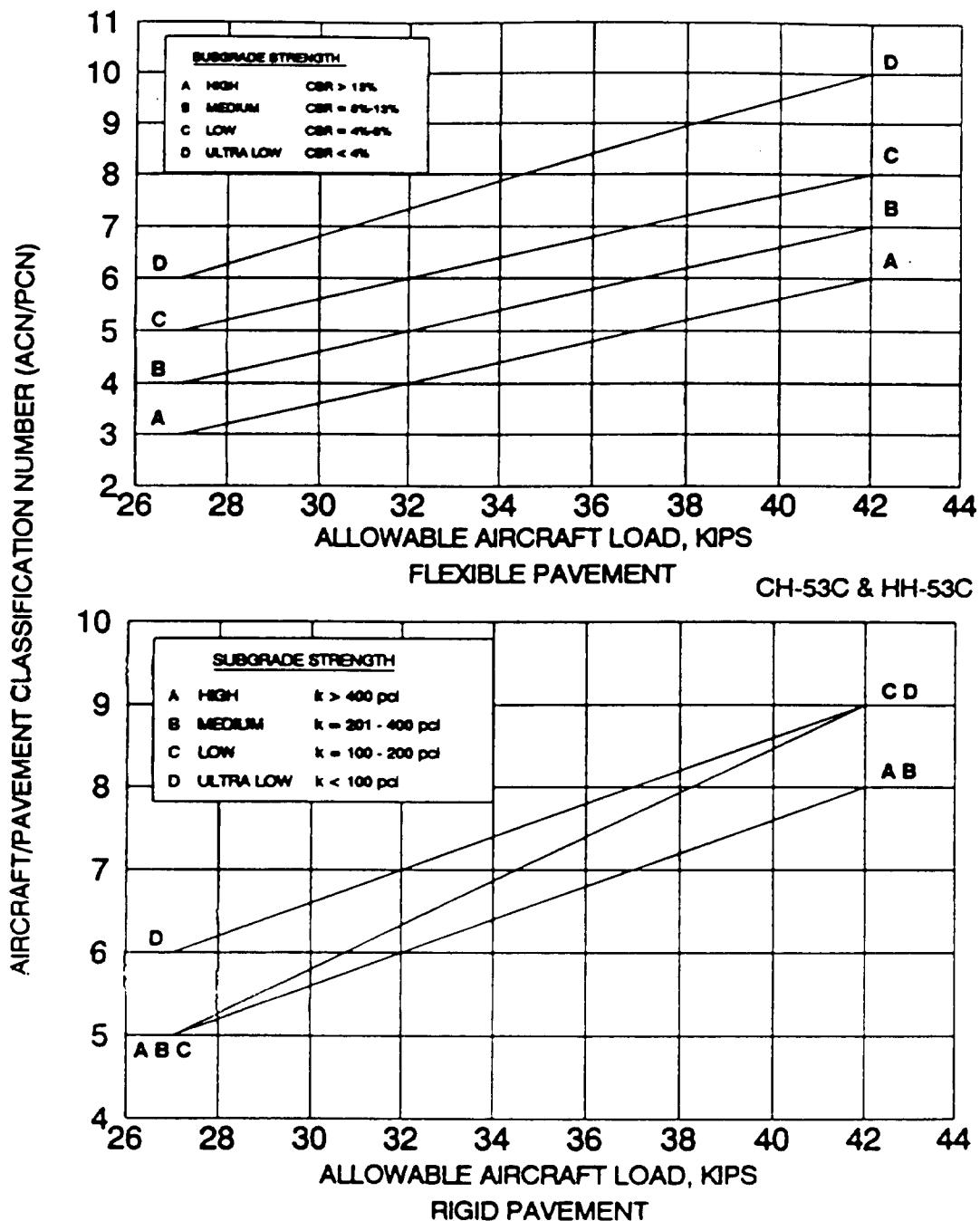


Figure A-560. Sikorsky S-65A (CH-53C and HH-53C), ACN/PCN Curves

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Aircraft Manufacturer Sikorsky Aircraft

Aircraft Engine Manufacturer General Electric (T700-GE-700)

No. of Engines 2 Engine Rating 1560 SHP

Minimum Take-Off Weight 13.7 k-lb

Maximum Take-Off Weight Peace-Time 20.4 k-lb

Maximum Take-Off Weight War-Time 22.0 k-lb

Maximum Landing Weight 22.0 k-lb

Hover Ceiling (In Ground Effect) †

Hover Ceiling (Out of Ground Effect) †

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades				Very Low D
	High A		Medium B	Low C	Ultra Low D	High A		Medium B	
	4	4	4	4	.4	4	4	4	
14	4	4	4	4	.4	4	4	4	4
20	6	6	6	6	6	6	6	6	6
22	7	7	7	7	7	7	7	7	7

Figure A-561. Sikorsky S-70 (HH-60A), Night Hawk

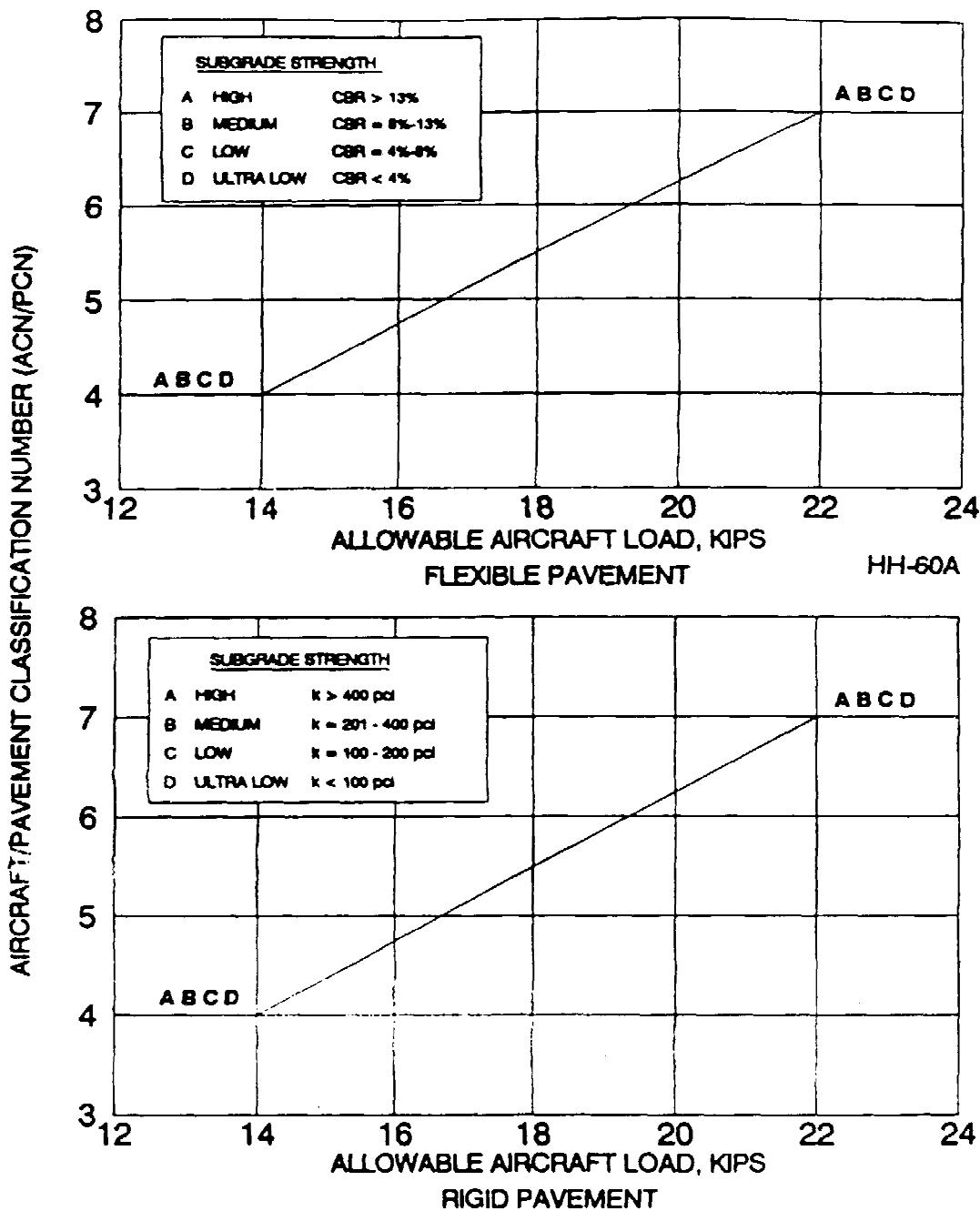


Figure A-562. Sikorsky S-70 (HH-60A), ACN/PCN Curves

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Aircraft Manufacturer Sikorsky AircraftAircraft Engine Manufacturer General Electric (T700-GE-700)No. of Engines 2 Engine Rating 1560 SHPMinimum Take-Off Weight 11.7 k-lbMaximum Take-Off Weight Peace-Time 16.3 k-lbMaximum Take-Off Weight War-Time 20.25 k-lbMaximum Landing Weight 20.25 k-lbHover Ceiling (In Ground Effect) 9,500 ft
(At 16.3 k-lb)Hover Ceiling (Out of Ground Effect) 5,600 ft
(At 16.3 k-lb)

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
12	3	3	3	3	3	3	3	3
16	5	5	5	5	5	5	5	5
20	6	6	6	6	6	6	6	6

Figure A-563. Sikorsky S-70 (UH-60A), Black Hawk

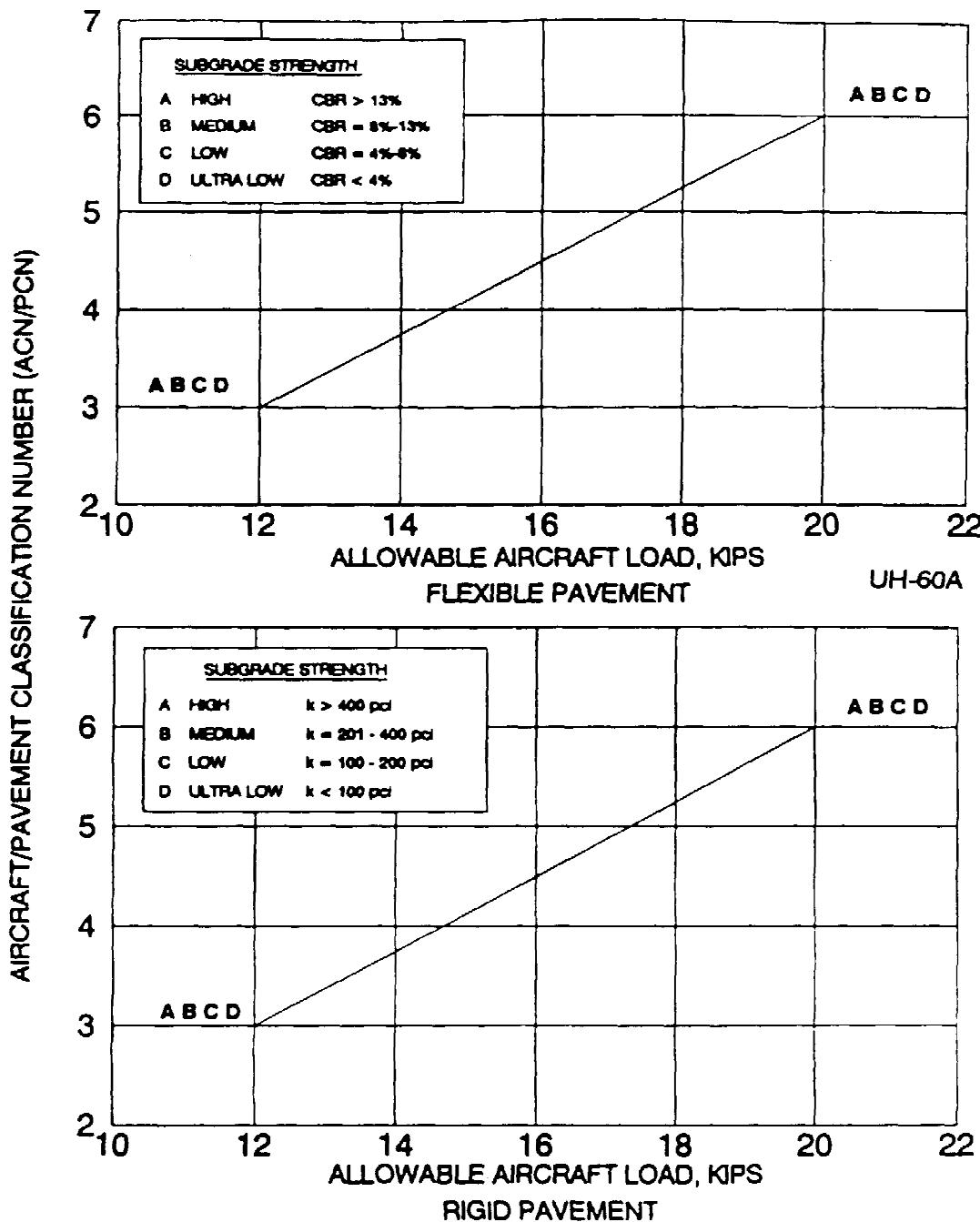


Figure A-564. Sikorsky S-70 (UH-60A), ACN/PCN Curves

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Aircraft Manufacturer Sikorsky AircraftAircraft Engine Manufacturer General Electric (CT7-2D)No. of Engines 2 Engine Rating 1723 SHPMinimum Take-Off Weight 11.2 k-lbMaximum Take-Off Weight Peace-Time 16.3 k-lbMaximum Take-Off Weight War-Time 20.25 k-lbMaximum Landing Weight 20.25 k-lbHover Ceiling (In Ground Effect) †Hover Ceiling (Out of Ground Effect) 3,950 ft
(At 20.25 k-lb)

ACN

<u>Weight</u>	<u>Rigid Pavement Subgrades</u>				<u>Flexible Pavement Subgrades</u>			
	<u>High</u> <u>A</u>	<u>Medium</u> <u>B</u>	<u>Low</u> <u>C</u>	<u>Ultra Low</u> <u>D</u>	<u>High</u> <u>A</u>	<u>Medium</u> <u>B</u>	<u>Low</u> <u>C</u>	<u>Very Low</u> <u>D</u>
11	3	3	3	3	3	3	3	3
16	5	5	5	5	5	5	5	5
20	6	6	6	6	6	6	6	6

Figure A-565. Sikorsky S-70C

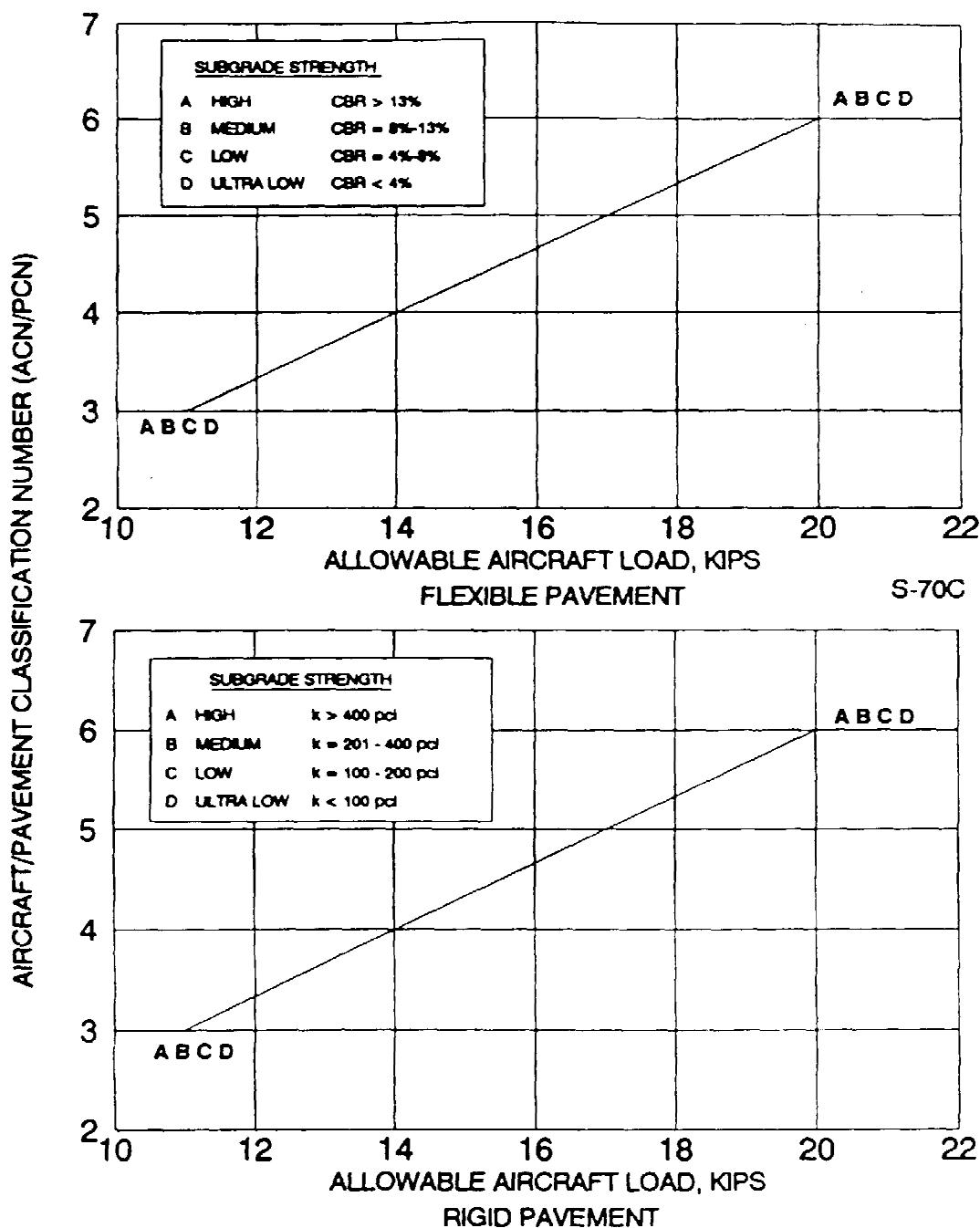


Figure A-566. Sikorsky S-70C, ACN/PCN Curves

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Aircraft Manufacturer Sikorsky AircraftAircraft Engine Manufacturer Allison (250-C30S)No. of Engines 2 Engine Rating 650 SHPMinimum Take-Off Weight 6.5 k-lbMaximum Take-Off Weight Peace-Time 10.3 k-lbMaximum Take-Off Weight War-Time 10.3 k-lbMaximum Landing Weight 10.3 k-lbHover Ceiling (In Ground Effect) 6,200 ftHover Ceiling (Out of Ground Effect) †

ACN

<u>Weight</u>	<u>Rigid Pavement Subgrades</u>				<u>Flexible Pavement Subgrades</u>			
	<u>High</u> <u>A</u>	<u>Medium</u> <u>B</u>	<u>Low</u> <u>C</u>	<u>Low</u> <u>D</u>	<u>High</u> <u>A</u>	<u>Medium</u> <u>B</u>	<u>Low</u> <u>C</u>	<u>Very Low</u> <u>D</u>

10,300 lb/165 psi**

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-567. Sikorsky S-76A

Aircraft Manufacturer Sikorsky Aircraft

Aircraft Engine Manufacturer Pratt and Whitney Canada (PT6B-36)

No. of Engines 2 Engine Rating 960 SHP

Minimum Take-Off Weight 7.4 k-lb

Maximum Take-Off Weight Peace-Time 11.4 k-lb

Maximum Take-Off Weight War-Time 11.4 k-lb

Maximum Landing Weight 11.4 k-lb

Hover Ceiling (In Ground Effect) 8,300 ft

Hover Ceiling (Out of Ground Effect) 5,400 ft

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High <u>A</u>	Medium <u>B</u>	Low <u>C</u>	Ultra Low <u>D</u>	High <u>A</u>	Medium <u>B</u>	Low <u>C</u>	Very Low <u>D</u>

11,400 lb/165 psi**

** The relative structural effect of an aircraft with a weight less than 12,500 pounds is reported as maximum aircraft weight and maximum tire pressure.

Figure A-568. Sikorsky S-76B

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Aircraft Manufacturer Westland PLC

Aircraft Engine Manufacturer Rolls-Royce (Gem 60-3)

No. of Engines 2 Engine Rating 1260 SHP

Minimum Take-Off Weight 9.3 k-lb

Maximum Take-Off Weight Peace-Time 12.8 k-lb

Maximum Take-Off Weight War-Time 12.8 k-lb

Maximum Landing Weight 12.8 k-lb

Hover Ceiling (In Ground Effect) 5,800 ft

Hover Ceiling (Out of Ground Effect) 2,800 ft

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
9	2	2	2	2	3	3	3	3
13	3	3	3	4	4	4	4	4

Figure A-569. Westland 30-100-60

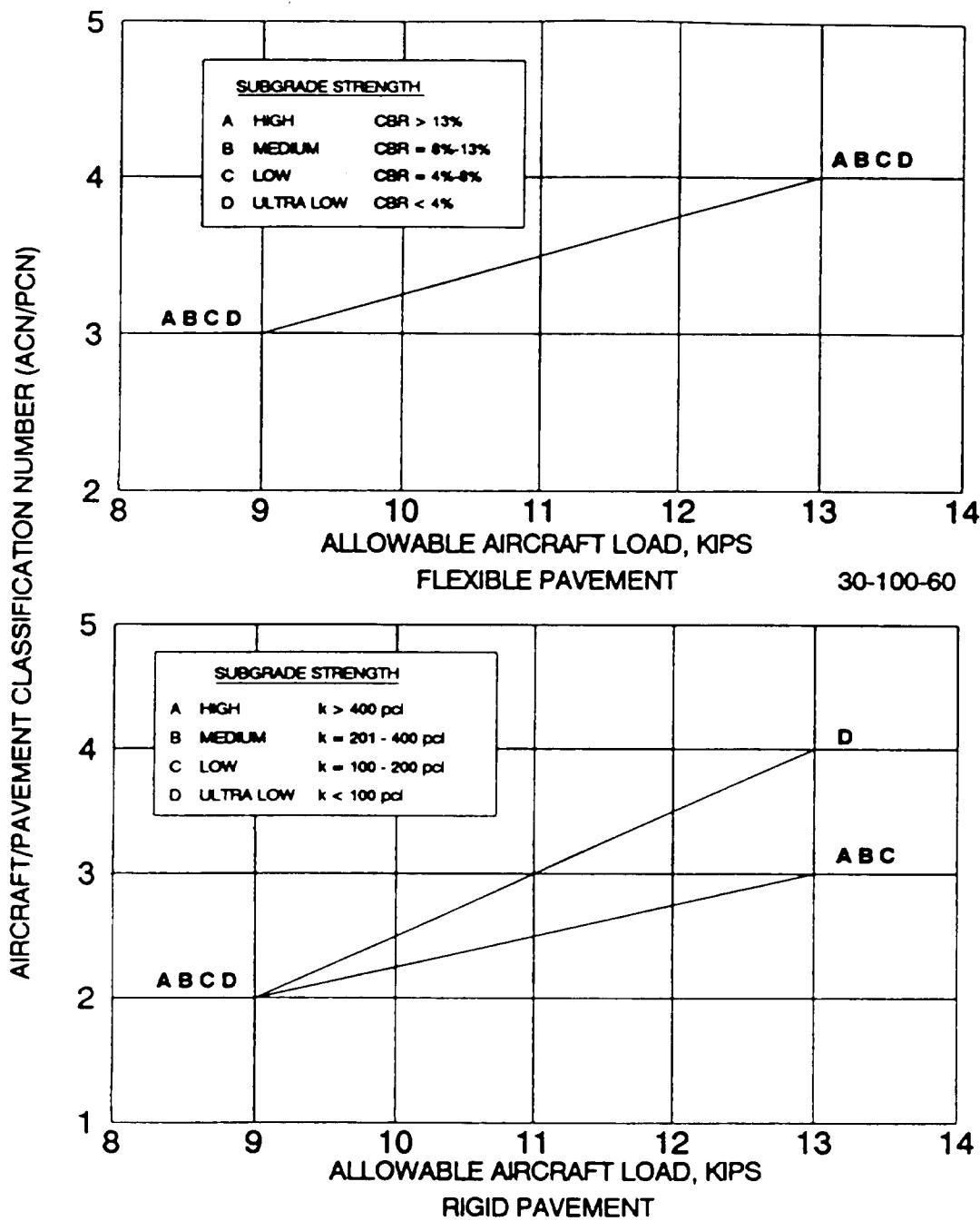


Figure A-570. Westland 30-100-60, ACN/PCN Curves

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Aircraft Manufacturer Westland PLC

Aircraft Engine Manufacturer General Electric (CT7-2B)

No. of Engines 2 Engine Rating 1712 SHP

Minimum Take-Off Weight 8.5 k-lb

Maximum Take-Off Weight Peace-Time 12.8 k-lb

Maximum Take-Off Weight War-Time 12.8 k-lb

Maximum Landing Weight 12.8 k-lb

Hover Ceiling (In Ground Effect) 6,600 ft

Hover Ceiling (Out of Ground Effect) 2,800 ft

ACN

Weight	Rigid Pavement Subgrades				Flexible Pavement Subgrades			
	High A	Medium B	Low C	Ultra Low D	High A	Medium B	Low C	Very Low D
9	2	2	2	2	3	3	3	3
13	3	3	3	4	4	4	4	4

Figure A-571. Westland 30-200

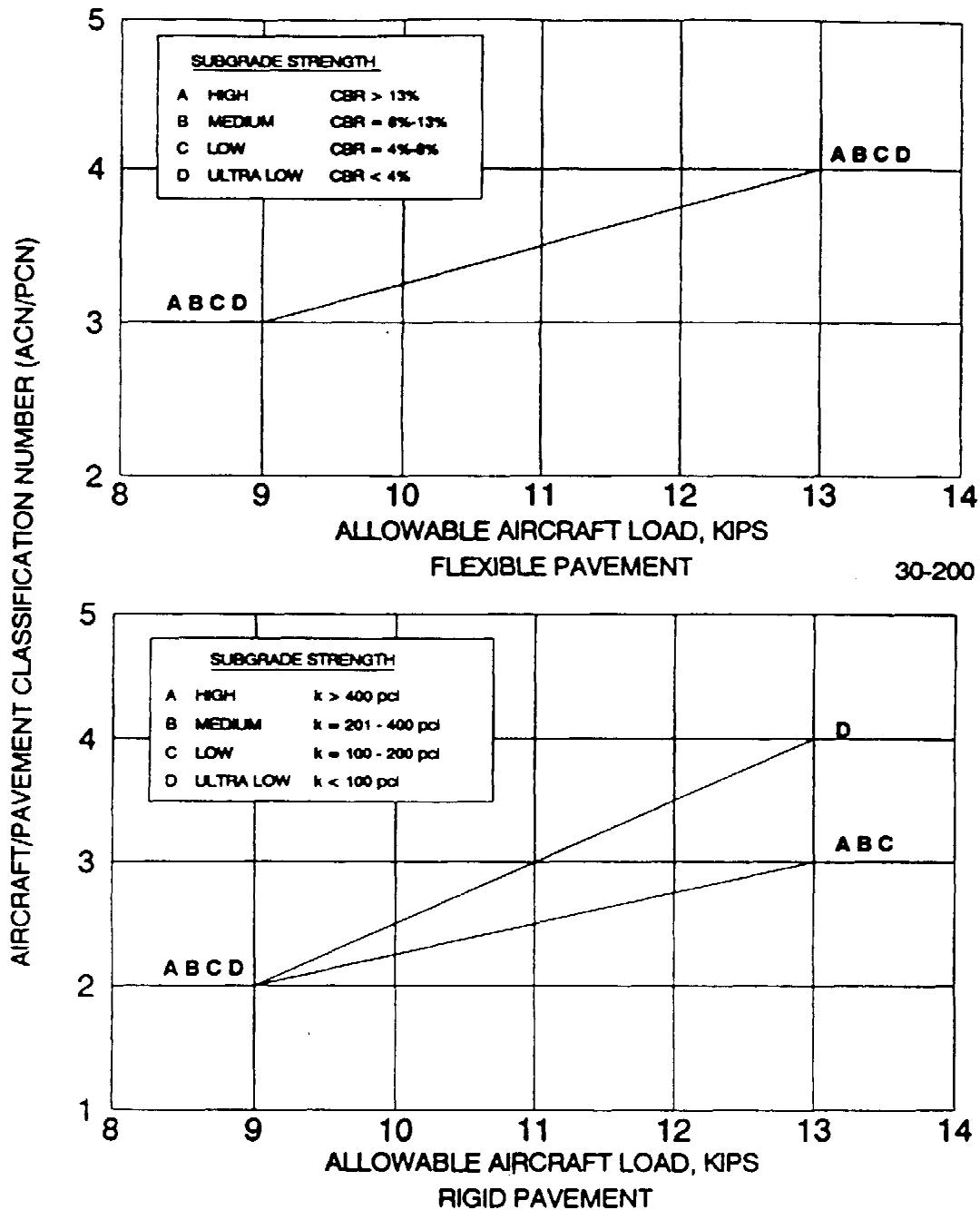


Figure A-572. Westland 30-200, ACN/PCN Curves

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Aircraft Manufacturer Westland PLCAircraft Engine Manufacturer General Electric (CT7-2B) or
Rolls-Royce Turbomeca (RTM 322)No. of Engines 2 Engine Rating 1712 SHP (GE) or
2100 SHP (Rolls-Royce)Minimum Take-Off Weight †Maximum Take-Off Weight Peace-Time 16.0 k-lbMaximum Take-Off Weight War-Time 16.0 k-lbMaximum Landing Weight 16.0 k-lbHover Ceiling (In Ground Effect) 6,300 ftHover Ceiling (Out of Ground Effect) 4,200 ft

ACN

<u>Weight</u>	<u>Rigid Pavement Subgrades</u>				<u>Flexible Pavement Subgrades</u>			
	<u>High</u> <u>A</u>	<u>Medium</u> <u>B</u>	<u>Low</u> <u>C</u>	<u>Ultra</u> <u>Low</u> <u>D</u>	<u>High</u> <u>A</u>	<u>Medium</u> <u>B</u>	<u>Low</u> <u>C</u>	<u>Very Low</u> <u>D</u>

Note: Adequate aircraft data is not available to express the relative structural effect of the aircraft.

Figure A-573. Westland 30-300